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EXAMINER	
SHANG, ANNAN Q	
ART UNIT	**PAPER NUMBER**
2614	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/639,912	BENGEULT ET AL.	
	Examiner	Art Unit	
	Annan Q Shang	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 08/13/04 have been fully considered but they are not persuasive.

Applicant argues that the claims 6-10 and 12 rejection under 35 U.S.C. 102(e) as being anticipated by Mitchell (6,529,706) and claims 1-5 and 13-23 rejection as being unpatentable over Mitchell in view of Frisco et al (6,208,307) has been rendered moot in view of an affidavit under 37 C.F.R. 1.131.

In response Examiner disagrees; page 18 of the documents submit with the affidavit, under the heading INVENTION DISCLOSURE shows **9/2/1998 as the date the invention was conceived, 11/5/1998 as the date built and tested**. From the **filling date, 08/16/2000**, of Applicant(s) application, it appears a the applications was filled 23 months (almost 2 years) from the date the invention was conceived and 20 months from the date the invention was built and tested.

Applicant should note MPEP 2138.06, on DILIGENCE REQUIRED IN PREPARING AND FILING PATENT APPLICATION

The diligence of attorney in preparing and filing patent application inures to the benefit of the inventor. Conception was established at least as early as the date a draft of a patent application was finished by a patent attorney on behalf of the inventor. Conception is less a matter of signature than it is one of disclosure. Attorney does not prepare a patent application on behalf of particular named persons, but on behalf of the true inventive entity. Six days to execute and file application is acceptable. *Haskell v.*

Coleburne, 671 F.2d 1362, 213 USPQ 192, 195 (CCPA 1982). See also *Bey v. Kollonitsch,* 866 F.2d 1024, 231 USPQ 967 (Fed. Cir. 1986) (Reasonable diligence is all that is required of the attorney. Reasonable diligence is established if attorney worked reasonably hard on the application during the continuous critical period. If the attorney has a reasonable backlog of unrelated cases, which he takes up in chronological order and carries out expeditiously, that is sufficient. Work on a related case(s) that contributed substantially to the ultimate preparation of an application can be credited as diligence.).

The evidence submitted is insufficient to establish a diligence from a date prior to the date of reduction to practice of Mitchell reference to either a constructive reduction to practice or an actual reduction to practice.

It appears from the various cited MPEP patent procedure and rules that Applicant waited almost two years from the date of conception to file an application. Hence Applicant declaration under 37 C.F.R 1.131, is not enough to overcome the prior art of record Mitchell, the rejections are hereby maintained and repeated below and made Final.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 6-10 and 12, are rejected under 35 U.S.C. 102(e) as being anticipated by **Mitchell (6,529,706).**

As to claim 6, note the **Mitchell** reference figure 2, discloses aircraft satellite communications system for distributing Internet service from direct broadcast satellites and further discloses a system for providing real time video signals to a mobile receiving platform via a satellite having at least one radio frequency (RF) transponder, the system comprising the following:

the claimed "a ground-based system for transmitting RF signals representative of said video..." is met by Direct Broadcast Satellite Ground Station (BSG-Station) 217 (col. 5, lines 25-28), which is ground based control center for transmits Internet service, television broadcast and other services (col. 5, lines 29-36 and col. 6, lines 28-33) "encoded RF signals representative of said content" via Satellite 240 (col. 5, lines 56-67) "RF transponder" to Aircraft 250;

the claimed "a mobile receiving system disposed on said mobile receiving platform..." is met by Direct Broadcast Satellite Receiver System (DBS-Rec) 260 or

Antenna 282 (fig. 2, col. 6, lines 30-42), which is associated with each Aircraft 250 "mobile platform" and carried by Aircraft 250, comprising the following:

the claimed "an antenna for receiving said RF signals..." is met by Antenna (Ant) 261 (col. 6, lines 33-38) which receives television programming and Internet signals "RF signals" from Transponder of Satellite 240, note that Ant 261 includes Antenna Controller 262 "an antenna control system..." for use in steering Ant 261 to track Satellite 240 as Aircraft 250 is in motion (col. 6, lines 37-52);

the claimed "a communications system responsive to signals received by said antenna..." is met by Direct Broadcast Satellite Receiver (DBS-Rec) 264 (col. 6, lines 43-62, fig. 4 and col. 11, lines 23-37), note that DBS-Rec 264 is responsive to signals received via Ant 261, communication with Ant 261 for generating baseband video signals and data signals from the television programming and Internet Service signals received by Ant 261 (col. 11, line 46-col. 12, line 4) and producing encoded signals from data transmissions input, via Modem 274, by each of a plurality of passengers "occupants" by means of in-seat video and audio distribution system 414 (col. 12, lines 5-36);

the claimed "a data content management system responsive to said communication system for determining which portions of the baseband video signals are to be transmitted to each..." is met by Aircraft Network Server (Air-NW-Ser 271 (col. 6, lines 57-63 and col. 8, lines 47-53), note that Air-NW-Ser 271 assigns a unique user address ID from the client computer (PCs) 272 or computing device (CDs) "each plurality of access stations" (col. 9, lines 21-31), and determines which portions of the

baseband video signals to transmit to each CC 272 for viewing by individual passengers on Aircraft 250 (col. 11, line 46-col. 12, line 4 and line 5+);

the claimed "a distributing for routing said portions of said baseband video signals to specific ones of said access station..." is met by Aircraft Computer Network (Air-NW) 270 (col. 6, lines 53-62 and col. 11, line 62-col. 12, line 20), which connected to Air-NW-Ser 271 and distributes baseband video signals and data signals, output from Air-NW-Ser 271 via an Ethernet or Serial Data Bus 273 with a plurality of connecting points "access stations," to the specific passengers based in response to requests by the passengers (col. 6, lines 57-63 and col. 10, lines 58-63), note that Air-NW 270 includes a plurality of PCs or CDs 272 that are connected via Ethernet, data bus or wirelessly to Air-NW 270 to individual passengers, and receive only specific subportions of baseband video signals and the data signals relating to previous information requests made by the passenger (col. 6, line 63-col. 7, line 17, col. 9, lines 21-col. 10, line 6 and col. 12, lines 5-36).

As to claim 7, Mitchell further discloses DBS-Rec 264 (col. 6, lines 43-62, fig. 4 and col. 11, lines 23-37), includes a plurality of integrated receiver/decoders for decoding, demodulating and digital-to-analog converting received RF signals into baseband video signals (col. 11, line 46-col. 12, line 4 and lines 5-35)

As to claim 8, Mitchell further discloses where the data content management system comprising an Air-NW-Ser 271 (col. 6, lines 57-63 and col. 8, lines 47-53).

As to claims 9 and 10, Mitchell further discloses where the baseband signals represent live television signals and direct broadcast television signals (col. 6, lines 16-27 and col. 12, lines 5-36).

As to claim 12, Mitchell further discloses where BSG-Station 217 (col. 5, lines 25-28) operates to transmit encoded data signals to Transponder of Satellite 240 and where DBS-Rec 260 or Antenna 282 (fig. 2, col. 6, lines 30-42), which is associated with each Aircraft 250 demodulates and D/A convert the RF signals to produces baseband data signals (col. 11, line46-col. 12, line 4 and line 5-36).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-5 and 13-23, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Mitchell (6,529,706)** in view of **Frisco et al (6,208,307).**

As to claim 1, note the **Mitchell** reference figure 2, discloses aircraft satellite communications system for distributing Internet service from direct broadcast satellites and further discloses a system for providing data content to plurality of mobile platforms via at least one satellite having at least one radio frequency (RF) transponder, and for transmitting data content from the mobile platforms via the RF transponder to a ground-based control center comprising the following:

the claimed "an independent mobile system associated with each said mobile platform..." is met by Direct Broadcast Satellite Receiver System (DBS-Rec) 260 or Antenna 282 (fig. 2, col. 6, lines 30-42), which is associated with each Aircraft 250 "mobile platform" and carried by Aircraft 250;

the claimed "a ground-based antenna system associated with said ground-based control center..." is met by Antenna System (Ant-S) 231 (col. 5, lines 25-28), which is a ground-based antenna system associated with Direct Broadcast Satellite Ground Station (BSG-Station) 217 "ground based control center" note that BSG-Station 217 transmits Internet service, television broadcast and other services (col. 5, lines 29-36 and col. 6, lines 28-33) "encoded RF signals representative of said content" via Satellite 240 (col. 5, lines 56-67) "RF transponder" to Aircraft 250;

each (DBS-Rec) 260 of Aircraft 250 comprises the following:

the claimed "a steerable receive antenna..." is met by Antenna (Ant) 261 (col. 6, lines 33-48 and col. 10, lines 23-27); the claimed "a communication subsystem in communication with each of said antennas..." is met by Direct Broadcast Satellite Receiver (DBS-Rec) 264 (col. 6, lines 43-62, fig. 4 and col. 11, lines 23-37), note that DBS-Rec 264 is in communication with Ant 261 for generating baseband video signals and data signals from the television programming and Internet Service signals received by Ant 261 (col. 11, line 46-col. 12, line 4) and producing encoded signals from data transmissions input, via Modem 274, by each of a plurality of passengers "occupants" by means of in-seat video and audio distribution system 414 (col. 12, lines 5-36);

the claimed "a data content management system for filtering of portions of said data content not addressed to occupants..." is met by Aircraft Network Server (Air-NW-Ser 271 (col. 6, lines 57-63 and col. 8, lines 47-53), note that Air-NW-Ser 271 assigns a unique user address ID from the client computer 272 (col. 9, lines 21-31), filters out data content not addressed to passengers and controls the appropriate request data content to each passenger on Aircraft 250;

the claimed "a network for distributing said baseband video signals and said data signals output from the said data management..." is met by Aircraft Computer Network (Air-NW) 270 (col. 6, lines 53-62 and col. 11, line 62-col. 12, line 20), which connected to Air-NW-Ser 271 and distributes TV signals "baseband video signals" and Internet data "data signals" output from Air-NW-Ser 271 to the passengers, note that Air-NW 270 via an Ethernet or Serial Data Bus 273 with a plurality of connecting points "access stations," to the specific passengers based in response to requests by the passengers (col. 6, lines 57-63 and col. 10, lines 58-63), note that Air-NW 270 includes a plurality of PCs or CDs 272 that are connected via Ethernet, data bus or wirelessly to Air-NW 270 to individual passengers, and receive only specific subportions of TV signals and Internet data relating to previous information requests made by the passenger (col. 6, line 63-col. 7, line 17, col. 9, lines 21-col. 10, line 6 and col. 12, lines 5-36), and further teaches transmitting passenger requests via a two Satellite "RF transponder" Back-channel communication system 280 to Ground Station 284 for full interactive Internet as desired by the passengers (col. 6, line 63-col. 7, line 1+)

Mitchell teaches a Steerable Receiving Antenna (Ant) 261, but fails to explicitly teach that Ant 261 is also a Steerable Transmitting Antenna.

However, note **Frisco et al** reference figures 6 and 7, disclose an aircraft entertainment system, which includes a steerable Antenna System 35, transmitter/receiver (figs. 1, 6, 7, col. 8, lines 33-55 and col. 9, lines 1-6).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Frisco to provide a steerable transmitter/receiver for transmitting/receiving data content which can be steered over a wide solid angle and fired outwards without been obstructed by any part of the aircraft structure and furthermore provide a single antenna on the aircraft where cost effectiveness and low weight are especially important.

As to claim 2, Mitchell further discloses where the connections points Ethernet NW or data bus 273 or 275 is coupled to PCs or CDs 272 (col. 6, lines 57-62).

Claim 3 is met as previously discussed with respect to claim 8.

As to claim 4, Mitchell further discloses where Satellite 240 comprises a plurality of transponders (col. 5, lines 8-15), and BSG-Station 217 transmits Internet service, television broadcast and other services (col. 5, lines 29-36 and col. 6, lines 28-33) "encoded RF signals representative of said content" via a designated one of Transponders of Satellite 240 (col. 5, lines 56-67) "RF transponder" to Aircraft 250.

As to claim 5, Mitchell further discloses Air-NW 270 "a local area network" (col. 6, lines 53-57).

As to claim 13, note the **Mitchell** reference figure 2, discloses aircraft satellite communications system for distributing Internet service from direct broadcast satellites and further discloses a system for supplying a plurality of channels of data content to a plurality of independent mobile platforms, wherein each said mobile receiving platform has a plurality of occupants, and for receiving data content transmitted from said mobile receiving platform by said occupants, said system comprising the following:

the claimed "a ground-based antenna for transmitting encoded radio frequency (RF) signals..." is met by Antenna System (Ant-S) 231 (fig. 2 and col. 5, lines 25-28), which is a ground-based antenna system associated with Direct Broadcast Satellite Ground Station (BSG-Station) 217 "ground based control center" note that BSG-Station 217 transmits encoded Internet service, television broadcast and other services (col. 5, lines 29-36 and col. 6, lines 28-33) "data content" via Satellite 240 (col. 5, lines 56-67) "RF transponder" to Aircraft 250;

the claimed "at least one satellite having a plurality of RF transponders in orbit over a desired geographical coverage area..." is met by Satellite 240 (col. 5, lines 56-67), note that Satellite 240 can be used to the geographical coverage within which Aircraft 250 is traveling and includes plurality of transponders for transponding the encoded RF signals (col. 4, line 60-col. 5, line 14 and col. 10, lines 23-30);

the claimed "a mobile receiving system disposed on said mobile receiving platform..." is met by Direct Broadcast Satellite Receiver System (DBS-Rec) 260 or Antenna 282 (fig. 2, col. 6, lines 30-42), which is associated with each Aircraft 250 "mobile platform" and carried by Aircraft 250, comprising the following:

the claimed "an antenna system including a receiver antenna for receiving said encoded RF signals..." is met by Antenna (Ant) 261 (col. 6, lines 33-38) which receives television programming and Internet signals "RF signals" from designated Transponder of Satellite 240, note that Ant 261 includes Antenna Controller 262 "an antenna control system..." for use in steering Ant 261 to track Satellite 240 to receive RF signals as Aircraft 250 is in motion (col. 6, lines 37-52);

the claimed "a communication system responsive to said encoded RF signals received by said receiving antenna for demodulating and decoding said encoded RF signals..." is met by Direct Broadcast Satellite Receiver (DBS-Rec) 264 (col. 6, lines 43-62, fig. 4 and col. 11, lines 23-37), note that DBS-Rec 264 is responsive to signals received via Ant 261, for generating demodulating and decoding the encoded RF signals to produced baseband video signals and data signals from the television programming and Internet Service signals received via Ant 261 (col. 11, line 46-col. 12, line 4) and Modem 274 that transmits data content from each of a plurality of passengers "occupants" via Antenna 282 to another designated transponder of Satellite 283 (col. 6, line 65-col. 7, line 24) for full interactive Internet;

the claimed "data content management system responsive to said communications system for determining which portions of said baseband video signals and portions of said data signals to specific ones of..." is met by is met by Aircraft Network Server (Air-NW-Ser 271 (col. 6, lines 57-63 and col. 8, lines 47-53), note that Air-NW-Ser 271 assigns a unique user address ID from the client computer (PCs) 272 or computing device (CDs) (col. 9, lines 21-31), which are connected via an Ethernet or

Serial Data Bus 273 with a plurality of connecting points "access stations," (col. 6, lines 57-63 and col. 10, lines 58-63), and determines which portions of the baseband video signals and data signals to transmit to each PCs or CDs 272 on Aircraft 250 (col. 11, line 46-col. 12, line 4 and line 5+);

the claimed "a network system for routing said portions of said baseband video signals and data signals to specific ones of said access station..." is met by Aircraft Computer Network (Air-NW) 270 (col. 6, lines 53-62 and col. 11, line 62-col. 12, line 20), which connected to Air-NW-Ser 271 and distributes TV signals "baseband signals" and Internet data "data signals" output from Air-NW-Ser 271 to the specific passengers based in response to requests by the passengers, note that Air-NW 270 includes a plurality of PCs or CDs 272 with connection points to Air-NW 270, where individual passengers receive only specific subportions of TV signals and Internet data relating to previous information requests made by the passenger (col. 6, line 63-col. 7, line 17, col. 9, lines 21-col. 10, line 6 and col. 12, lines 5-36);

Mitchell teaches a Receiving Antenna (Ant) 261, but fails to explicitly teach that Ant 261 is also a Transmitting Antenna for transmitting the data content from each passenger to a designated one the RF transponders.

However, note **Frisco et al** reference figures 6 and 7, disclose an aircraft entertainment system, which includes an Antenna System 35, transmitter/receiver for transmit data content to and to/from passenger and servers (figs. 1, 6, 7, col. 8, lines 33-55 and col. 9, lines 1-6).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Frisco to provide a transmitter/receiver for transmitting/receiving data content, to independently control the Antenna to appropriate satellite or transponder to retrieve or transmit data and furthermore provide a single antenna on the aircraft where cost effectiveness and low weight are especially important.

Claim 14 is met as previously discussed with respect to claim 7.

Claim 15 is met as previously discussed with respect to claim 8.

As to claim 16, Mitchell inherently teaches a data system for supplying crew information to Air-NW-Ser 271 (col. 13, lines 4-11), note that a Cabin file server function or a data distribution system in the Air-NW can be connected to an Ethernet or the serial interface 273 and since the passenger has full interactive Internet access to any information, crew information can be supplied or retrieve by each passenger.

As to claim 17, Mitchell further discloses an air telephone system on board Aircraft 250 for transmitting data services to Ground Station 284 via Radio 281, Antenna 282 and RF medium 285 (fig. 2 and col. 7, lines 19-33).

As to claimed 18, note the **Mitchell** reference figure 2, discloses aircraft satellite communications system for distributing Internet service from direct broadcast satellites and further discloses a system for system for enabling individual occupants on board a moving platform to transmit and receive data content in real time from a ground based data source, the system comprising the following:

the claimed "a ground based system for transmitting radio frequency (RF) signals representative of said data..." is met by Antenna System (Ant-S) 231 (fig. 2 and col. 5, lines 25-28), which is a ground-based antenna system associated with Direct Broadcast Satellite Ground Station (BSG-Station) 217 "ground based control center," and transmits encoded Internet service, television broadcast and other services (col. 5, lines 29-36 and col. 6, lines 28-33) "radio frequency (RF) signals" representative of data content obtained from Television programming source 225, Web Site 205, various Internet servers 210, etc., "data content sources" via Satellite 240 (col. 5, lines 56-67) "RF transponder" to Aircraft 250 "mobile platform";

the claimed "a satellite system having at least one RF transponders for transponding RF signals received from said ground based system to said mobile platform..." is met by Satellite 240 (col. 5, lines 56-67), note that Satellite 240 includes plurality of transponders for transponding RF signals received from BSG-Station 217 to Aircraft 250 (col. 4, line 60-col. 5, line 14 and col. 10, lines 23-30);

the claimed "a mobile receiving system disposed on said mobile receiving platform..." is met by Direct Broadcast Satellite Receiver System (DBS-Rec) 260 or Antenna 282 (fig. 2, col. 6, lines 30-42), which is associated with each Aircraft 250 "mobile platform" and carried by Aircraft 250, comprising the following:

the claimed "a receive antenna for receiving said encoded RF signals..." is met by Antenna (Ant) 261 (col. 6, lines 33-38) which receives television programming and Internet signals "RF signals" via Transponder of Satellite 240.

the claimed "a communication subsystem in communication with said antenna for converting said RF received signals into data content..." is met by Direct Broadcast Satellite Receiver (DBS-Rec) 264 (col. 6, lines 43-62, fig. 4 and col. 11, lines 23-37), note that DBS-Rec 264 is a communication subsystem that is in communication with Ant 261, for converting television programming and Internet Service signals "RF signals" received via Ant 261 into data content (col. 11, line 46-col. 12, line 4), and further Modem 274 that transmits data content from each of a plurality of passengers "occupants" via Antenna 282 to another designated transponder of Satellite 283 (col. 6, line 65-col. 7, line 24) for full interactive Internet;

the claimed "data content management system for receiving said data content from said communications system for determining which portions of content is to be distributed..." is met by is met by Aircraft Network Server (Air-NW-Ser 271 (col. 6, lines 57-63 and col. 8, lines 47-53), note that Air-NW-Ser 271 assigns a unique user address ID from the client computer (PCs) 272 or computing device (CDs) "each plurality of access stations" (col. 9, lines 21-31), and determines which portions of the baseband video signals and data signals "data content" to distribute to each PCs or CDs 272 on Aircraft 250 (col. 11, line 46-col. 12, line 4 and line 5+);

the claimed "a network for distributing said subportions of said data content to occupants such that each said occupant receives only specific ones of said subportions..." is met by Aircraft Computer Network (Air-NW) 270 (col. 6, lines 53-62 and col. 11, line 62-col. 12, line 20), which connected to Air-NW-Ser 271 and distributes Television signals and Internet signals "subportions of data content" to each passenger

or Personal Computers (PC) or Computing Device (CD) 272, where individual passengers receive only specific subportions of TV signals and/or Internet signals in accordance with to previous information transmission via Modem 274 made by the passenger (col. 6, line 63-col. 7, line 17, col. 9, lines 21-col. 10, line 6 and col. 12, lines 5-36), and further teaches transmitting passenger requests via a two Satellite "RF transponder" Back-channel communication system 280 to Ground Station 284 for full interactive Internet as desired by the passengers (col. 6, line 63-col. 7, line 1+).

Mitchell teaches a Receiving Antenna (Ant) 261, but fails to explicitly teach that Ant 261 is also a Transmitting Antenna signals from Aircraft 250 signals to the transponder and further Transmitting Antenna for converting the received TV signals and Internet signals into data content and converting the passenger data into RF signals and transmit to the transponder.

However, note **Frisco et al** reference figures 6 and 7, disclose an aircraft entertainment system, which includes an Antenna System 35, transmitter/receiver for converting data content of servers and passengers into RF signals and transmitting to a Ground Station Receiver 34 via transponder of Satellite 33 (figs. 1, 6, col. 4, lines 53-67, col. 8, lines 33-55).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Frisco to provide a transmitter/receiver for transmitting/receiving data content from a ground station via satellite and furthermore provide a single antenna on the aircraft where cost effectiveness and low weight are especially important.

Claim 19 is met as previously discussed with respect to claim 5.

Claim 20 is met as previously discussed with respect to claim 2.

As to claim 21, note the **Mitchell** reference figure 2, discloses aircraft satellite communications system for distributing Internet service from direct broadcast satellites and further discloses a system for facilitating bi-directional communication between a ground-based control center and a plurality of mobile platforms, of data content via satellite having a plurality of RF transponders, the system comprising the following:

the claimed "a ground-based antenna for transmitting encoded RF signals from said ground-based control center..." is met by Antenna System (Ant-S) 231 (col. 5, lines 25-28), which is a ground-based antenna system associated with Direct Broadcast Satellite Ground Station (BSG-Station) 217 "ground based control center" and transmits Internet service, television broadcast and other services (col. 5, lines 29-36 and col. 6, lines 28-33) "encoded RF signals.." representing the TV, Internet and other data content via Satellite 240 (col. 5, lines 56-67) "RF transponder" to Aircraft 250;

the claimed "a mobile receiving system disposed on each said mobile platform..." is met by Direct Broadcast Satellite Receiver System (DBS-Rec) 260 or Antenna 282 (fig. 2, col. 6, lines 30-42), which is associated with each Aircraft 250 "mobile platform" each (DBS-Rec) 260 of Aircraft 250 comprises the following:

the claimed "a steerable receive antenna..." is met by Antenna (Ant) 261 (col. 6, lines 33-48 and col. 10, lines 23-27), which receives the encoded TV, Internet and other signals "encoded RF signals" from a designated one of RF Trandponders of Satellite 240, note that Ant 261 includes Antenna Controller 262 "an antenna control system..."

for use in steering Ant 261 to track Satellite 240 to receive RF signals as Aircraft 250 is in motion (col. 6, lines 37-52);

the claimed "a communication system responsive to said encoded RF signals received by said receive antenna for generating output signals representative of live television programming..." is met by Direct Broadcast Satellite Receiver (DBS-Rec) 264 (col. 6, lines 43-62, fig. 4 and col. 11, lines 23-37), note that DBS-Rec 264 is responsive to signals received via Ant 261, for generating output signals representative of live television programming and Internet Service signals received via Ant 261 (col. 11, line 46-col. 12, line 4);

the claimed "a server responsive to said communications system for filtering off portions of said live television programming and portions of said Internet data representing data content..." is met by is met by Aircraft Network Server (Air-NW-Ser 271 (col. 6, lines 57-63 and col. 8, lines 47-53), note that Air-NW-Ser 271 assigns a unique user address ID from the client or passenger computer (PCs) 272 or computing device (CDs) (col. 9, lines 21-31), and filters off portions of television programming and Internet data representing data content which have not requested by the passengers of each Aircraft 250 and directing only specific requested data content to each passenger of Aircraft 250 (col. 11, line 46-col. 12, line 4 and line 5+);

the claimed "a network system for routing said portions of said output signals and said portions of said Internet data to specific ones of said access station..." is met by Aircraft Computer Network (Air-NW) 270 (col. 6, lines 53-62 and col. 11, line 62-col. 12, line 20), which connected to Air-NW-Ser 271 and distributes TV signals and Internet

data output from Air-NW-Ser 271 to the specific passengers based in response to requests by the passengers, note that Air-NW 270 distributes data content via an Ethernet or Serial Data Bus 273 with a plurality of connecting points "access stations," to the specific passengers based in response to requests by the passengers (col. 6, lines 57-63 and col. 10, lines 58-63), note that Air-NW 270 includes a plurality of PCs or CDs 272 that are connected via Ethernet, data bus or wirelessly to Air-NW 270 to individual passengers, and receive only specific subportions of TV signals and Internet data relating to previous information requests made by the passenger (col. 6, line 63-col. 7, line 17, col. 9, lines 21-col. 10, line 6 and col. 12, lines 5-36).

Mitchell teaches a Receiving Antenna (Ant) 261, but fails to explicitly teach that Ant 261 includes a Transmitter to track the Satellite as the Aircraft 250 is in motion.

However, note **Frisco et al** reference figures 6 and 7, disclose an aircraft entertainment system, which includes an Antenna System 35, transmitter/receiver for tracking aircraft when in motion (figs. 1, 6, 7, col. 8, lines 33-55 and col. 9, lines 1-6).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Frisco to provide a transmitter/receiver for tracking aircraft when in motion and to transmitting/receiving data content at any geographical locations and furthermore provide a single antenna where cost effectiveness and low weight are especially important, such as aircraft.

As to claim 22, Mitchell further discloses an electronically steerable Ant 261, but fails to explicitly teach phased array antenna.

However, Frisco teaches an electronically steerable multi-beam, phase array antenna (col. 8, lines 33-56 and col. 10, lines 22-30).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Frisco into the system of Mitchell to provide electronically steerable, phase array antenna for produced a narrow beam which can be steered over a wide solid angle and fired outwards without been obstructed by any part of the aircraft structure.

As to claim 23, the claimed "method of transmitting data content..." is composed of the same structural element of rejected claim 1.

7. Claim 11, is rejected under 35 U.S.C. 103(a) as being unpatentable over **Mitchell (6,529,706)** as applied to claim 6 above, and in view of **Amarant et al (5,592,539).**

As to claim 11, Mitchell teaches all the claimed limitation as previously discussed with respect to claim 6, but fails to explicitly teach a ground station server for managing accounting and billing operations associated with access to the system by the user.

However, note Amarant et al reference, disclose system for completing air-to-ground telephone calls where Ground Station 101 and Platform 102 manages accounting and billing operations associated with each caller (fig. 1 and col. 2, lines 10-39).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Amarant into the system of Mitchell to

provide a network operation center for managing accounting and billing information of passenger to enable service provider to billing users' according to requested services provided to each user.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sachdev (6,574,338) discloses information delivery system and method.

Hiett (6,477,152) discloses apparatus for data communications.

Bishop, Jr. et al (6,078,577) disclose system and method for packet data communication.

Levine (5,974,349) discloses remote, aircraft, global, paperless maintenance system.

Beele et al (5,861,856) disclose airborne radar.

9. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10 Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q Shang** whose telephone number is **703-305-2156**. The examiner can normally be reached on **700am-500pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W Miller** can be reached on **703-305-4795**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC) at 866-217-9197 (toll-free).**

Annan Q. Shang.

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